AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listing of the claims in the application:

LISTING OF THE CLAIMS:

Claim 1. (currently amended) A method for determining a disease state of obesity, osteoporosis, diabetes, or osteoarthritis in a subject comprising;

obtaining a biological sample containing protein from said subject,

measuring levels of protein markers of the disease state in said sample, and

comparing the levels of said markers to the levels of the same markers in a control sample from a subject not having the disease state or a control standard.

Claim 2. (currently amended) The method of claim 1 wherein the protein markers are selected from the group consisting of ~~the markers in Tables 1-5~~:

19 / HUSERFR3A

316 / HUSERFR3A

420 / HUSERFR3A

501 / HUSERFR3A

680 / HUSERFR3A

1139 / HUSERFR3A

236 (S 2) / HUSERFR3A

138 (S 22) / HUSERFR3A

(S 24) / HUSERFR3A

141 (S 33) / HUSERFR3A

519 / HUSERFR6

39 / HUSERFRAC5

72 / HUSERFRAC5
96 / HUSERFRAC5
101 / HUSERFRAC5
104 / HUSERFRAC5
105 / HUSERFRAC5
117 / HUSERFRAC5
128 / HUSERFRAC5
134 / HUSERFRAC5
137 / HUSERFRAC5
175 / HUSERFRAC5
241 / HUSERFRAC5
333 / HUSERFRAC5
355 / HUSERFRAC5
370 / HUSERFRAC5
397 / HUSERFRAC5
421 / HUSERFRAC5
552 / HUSERFRAC5
607 / HUSERFRAC5
890 / HUSERFRAC5
ALPHA 1 / HUSERFRAC5
UKN 12 / HUSERFRAC5
UKN 20 / HUSERFRAC5
36 / HUSERFR3A
128 / HUSERFR3A
152 / HUSERFR3A
245 / HUSERFR3A
431 / HUSERFR3A
228 / HUSERFR6
243 / HUSERFR6
516 / HUSERFR6

160 / HUSERFRAC5
183 / HUSERFRAC5
187 / HUSERFRAC5
244 / HUSERFRAC5
310 / HUSERFRAC5
607 / HUSERFRAC5
620 / HUSERFRAC5
856 / HUSERFRAC5
1042 / HUSERFRAC5
1249 / HUSERFRAC5
UKN 12 / HUSERFRAC5
UKN 6 / HUSERFRAC5
14 / HUSERFR3A
28 / HUSERFR3A
332 / HUSERFR3A
832 / HUSERFR3A
1389 / HUSERFR3A
1865 / HUSERFR3A
181 (S 15) / HUSERFR3A
26/44 (S 27) / HUSERFR3A
101 / HUSERFRAC5
1992 / HUSERFR6.

Claim 3. (currently amended) The method of claim 2 wherein the protein markers are selected from the group consisting of the markers for the conditions of obesity, osteoporosis, diabetes, or osteoarthritis ~~or hypertension~~.

Claim 4. (canceled).

Claim 5. (original) The method of claim 1 wherein the levels of protein markers determines the relative severity of the disease state.

Claim 6. (currently amended) The method of claims 1 or 2 further comprising;

measuring levels of individual proteins in a proteome of said biological sample from the subject,

comparing these levels with levels of the same proteins in the proteome from a sample and from a control subject or a control standard, and

detecting which proteins have levels that are increased or decreased by a statistically significant amount,

wherein the proteins so detected are the markers for the disease state.

Claim 7. (currently amended) The method of claim 6 wherein the statistically significant amount is determined as ~~a~~ at $p<0.01$.

Claim 8. (currently amended) The method of claim 7 wherein the statistically significant amount is determined as at $p<0.001$.

Claim 9. (canceled).

Claim 10. (original) The method of claim 6 wherein said proteome is prepared by two-dimensional electrophoresis.

11. (currently amended) A protein marker selected from the group consisting of: ~~proteins of Tables 1-5~~

19 / HUSERFR3A

316 / HUSERFR3A

420 / HUSERFR3A

501 / HUSERFR3A

680 / HUSERFR3A

1139 / HUSERFR3A

236 (S 2) / HUSERFR3A

138 (S 22) / HUSERFR3A

(S 24) / HUSERFR3A

141 (S 33) / HUSERFR3A

519 / HUSERFR6

39 / HUSERFRAC5

72 / HUSERFRAC5

96 / HUSERFRAC5

101 / HUSERFRAC5

104 / HUSERFRAC5

105 / HUSERFRAC5

117 / HUSERFRAC5

128 / HUSERFRAC5

134 / HUSERFRAC5

137 / HUSERFRAC5

175 / HUSERFRAC5

241 / HUSERFRAC5

333 / HUSERFRAC5

355 / HUSERFRAC5

370 / HUSERFRAC5

397 / HUSERFRAC5

421 / HUSERFRAC5

552 / HUSERFRAC5

607 / HUSERFRAC5

890 / HUSERFRAC5

ALPHA 1 / HUSERFRAC5

UKN 12 / HUSERFRAC5

UKN 20 / HUSERFRAC5

36 / HUSERFR3A
128 / HUSERFR3A
152 / HUSERFR3A
245 / HUSERFR3A
431 / HUSERFR3A
228 / HUSERFR6
243 / HUSERFR6
516 / HUSERFR6
160 / HUSERFRAC5
183 / HUSERFRAC5
187 / HUSERFRAC5
244 / HUSERFRAC5
310 / HUSERFRAC5
607 / HUSERFRAC5
620 / HUSERFRAC5
856 / HUSERFRAC5
1042 / HUSERFRAC5
1249 / HUSERFRAC5
UKN 12 / HUSERFRAC5
UKN 6 / HUSERFRAC5
14 / HUSERFR3A
28 / HUSERFR3A
332 / HUSERFR3A
832 / HUSERFR3A
1389 / HUSERFR3A
1865 / HUSERFR3A
181 (S 15) / HUSERFR3A
26/44 (S 27) / HUSERFR3A
101 / HUSERFRAC5
1992 / HUSERFR6

520 / HUSERFR3A
1862 / HUSERFR3A
224/263 (S 20) / HUSERFR3A
468 / HUSERFR6
2184 / HUSERFR6
2335 / HUSERFR6
2391 / HUSERFR6
347 / HUSERFRAC5 and
800 / HUSERFRAC5.

Claim 12. (currently amended) A protein marker of ~~claim 11~~ selected from the proteins that are markers for the diseases of obesity, osteoporosis, diabetes, osteoarthritis or hypertension in a human body fluid wherein the level of said protein marker in a sample from a subject with the disease state differs from the level of said protein marker in a control standard by a statistically significant amount at $p<0.01$.

Claims 13-55. (canceled)

Claim 56. (new) The method of claims 1 or 2 wherein the sample is a body fluid.

Claim 57. (new) The method of claims 1 or 2 wherein the subject is human.

Claim 58. (new) The method of claims 1 or 2 wherein the subject has the natural disease and the disease state is being monitored.

Claim 59. (new) The protein marker of claim 12 wherein the p value is at $p<0.001$.

Claim 60. (new) A method for determining hypertension in a human subject comprising;

obtaining a body fluid sample containing protein from said subject,

measuring levels of protein markers of hypertension in said sample, and

comparing the levels of said markers to the levels of the same markers in a control sample from a subject not having hypertension or a control standard.

Claim 61. (new) The method of claim 60 wherein the protein markers are selected from the group consisting of:

520 / HUSERFR3A

1862 / HUSERFR3A

224/263 (S 20) / HUSERFR3A

468 / HUSERFR6

2184 / HUSERFR6

2335 / HUSERFR6

2391 / HUSERFR6

347 / HUSERFRAC5 and

800 / HUSERFRAC5.

Claim 62. (new) The method of claim 60 wherein the levels of protein markers determines the relative severity of hypertension.

Claim 63. (new) The method of claims 60 or 61 further comprising;

measuring levels of individual proteins in a proteome of said sample from the subject,

comparing these levels with levels of the same proteins in the proteome from a sample and from a control subject or a control standard, and

detecting which proteins have levels that are increased or decreased by a statistically significant amount,

wherein the proteins so detected are the markers for the disease state.

Claim 64. (new) The method of claim 63 wherein the statistically significant amount is determined as at $p<0.01$.

Claim 65. (new) The method of claim 64 wherein the statistically significant amount is determined as at $p<0.001$.

Claim 66. (new) The method of claim 63 wherein said proteome is prepared by two-dimensional electrophoresis.

Claim 67. (new) The method of claims 60 or 61 wherein the subject has the natural disease and the disease state is being monitored.

Claim 68. (new) The protein marker of claim 59 wherein the protein marker and is selected from the group consisting of.

19 / HUSERFR3A
316 / HUSERFR3A
420 / HUSERFR3A
501 / HUSERFR3A
680 / HUSERFR3A
1139 / HUSERFR3A
236 (S 2) / HUSERFR3A
138 (S 22) / HUSERFR3A

(S 24) / HUSERFR3A
141 (S 33) / HUSERFR3A
519 / HUSERFR6
39 / HUSERFRAC5
72 / HUSERFRAC5
96 / HUSERFRAC5
101 / HUSERFRAC5
104 / HUSERFRAC5
105 / HUSERFRAC5
117 / HUSERFRAC5
128 / HUSERFRAC5
134 / HUSERFRAC5
137 / HUSERFRAC5
175 / HUSERFRAC5
241 / HUSERFRAC5
333 / HUSERFRAC5
355 / HUSERFRAC5
370 / HUSERFRAC5
397 / HUSERFRAC5
421 / HUSERFRAC5
552 / HUSERFRAC5
607 / HUSERFRAC5
890 / HUSERFRAC5
ALPHA 1 / HUSERFRAC5
UKN 12 / HUSERFRAC5
UKN 20 / HUSERFRAC5
36 / HUSERFR3A
128 / HUSERFR3A
152 / HUSERFR3A
245 / HUSERFR3A

431 / HUSERFR3A

228 / HUSERFR6

243 / HUSERFR6

516 / HUSERFR6

160 / HUSERFRAC5

183 / HUSERFRAC5

187 / HUSERFRAC5

244 / HUSERFRAC5

310 / HUSERFRAC5

607 / HUSERFRAC5

620 / HUSERFRAC5

856 / HUSERFRAC5

1042 / HUSERFRAC5

1249 / HUSERFRAC5

UKN 12 / HUSERFRAC5

UKN 6 / HUSERFRAC5

14 / HUSERFR3A

28 / HUSERFR3A

332 / HUSERFR3A

832 / HUSERFR3A

1389 / HUSERFR3A

1865 / HUSERFR3A

181 (S 15) / HUSERFR3A

26/44 (S 27) / HUSERFR3A

101 / HUSERFRAC5

1992 / HUSERFR6

520 / HUSERFR3A

1862 / HUSERFR3A

224/263 (S 20) / HUSERFR3A

468 / HUSERFR6

2184 / HUSERFR6

2335 / HUSERFR6

2391 / HUSERFR6

347 / HUSERFRAC5 and

800 / HUSERFRAC5

wherein the p value is at $p<0.001$.